ThinkSystem SR860 V2 Sets 2 World Records with New SPEC ACCEL OpenACC Benchmark Result

Performance Benchmark Result (withdrawn product)

The Lenovo ThinkSystem SR860 V2 has set two new 1-node 4-socket performance world records with the SPECaccel_acc_base and SPECaccel_acc_peak metrics from the SPEC ACCEL Benchmark. The SPEC ACCEL Benchmark suite is the industry standard to evaluate hardware-based accelerator devices and the performance of parallel computing workloads.

This new benchmark result, published in a new SPEC Report on October 13, 2020, demonstrates that the ThinkSystem SR860 V2 continues Lenovo's leadership with outstanding performance for the server industry.

The ThinkSystem SR860 V2 has achieved the following scores:

- **SPECaccel_acc_base = 14.4**
- **SPECaccel_acc_peak = 14.4**

The SR860 V2 was configured as follows for the benchmark audit:

- 4x Intel Xeon Platinum 8380H Processors (28 cores, 2.90GHz)
- 1536 GB memory (48x 32GB RDIMMs at 3200MHz)
- 1TB SATA 2.5-inch SSD
- SUSE Linux Enterprise Server 15 SP2, 5.3.18-22-default
- Accelerator: 1x NVIDIA Tesla V100S 32GB GPU

Results referenced are current as of October 13, 2020.

The new Lenovo benchmark result can be found at:
https://www.spec.org/accel/results/res2020q4/accel-20200917-00147.html

About the ThinkSystem SR860 V2

The Lenovo ThinkSystem SR860 V2 server provides the speed and reliability you require today, with the scalability and workload versatility to you'll need to manage the explosive growth of data; its design offers considerable adaptability in order to match system configurations to projected workloads.

The ThinkSystem SR860 V2 is purpose-built to deliver affordable scalability in an industry-standard x86 platform, ideal for mission critical workloads such as SAP HANA in-memory computing, transactional databases, analytics, big data, and enterprise resource planning tasks.

Up to four 250W third-generation Intel® Xeon® Scalable CPUs configured with a mesh topology pair with up to four enterprise-class GPUs position the SR860 V2 to tackle compute-intensive applications, leveraging thousands of GPU processor cores and parallel architecture in combination with additional storage and networking that's both high-performing and flexible.

Key features:

- Up to four 250W 3rd Generation Intel Xeon Scalable CPUs configured with a mesh topology combines with up to 48 2.5" HDD or SSDs, of which 24 can be NVMe SSDs to speed database response times, reducing latency and eliminating storage as the throughput bottleneck in I/O-intensive applications such as transactional processing, HPC, and Big data applications.
- Supports two or four processors, allowing you to start with two processors and then upgrade to four when you need it.
- Capability to handle four double-width GPUs or eight single-width GPUs to accelerate AI inference and deep learning proficiencies.
- Support for up to 12TB of DDR4 memory with DIMMs operating at up to 3200 MHz at 2DPC, and Intel Optane™ Persistent Memory 200 Series accelerates performance for in-memory databases and applications, reducing downtime and increasing application availability.
- High I/O bandwidth coupled with a generous number of PCIe expansion slots provides the additional connectivity scalability as your business and workload demands increase.
- Full Lenovo XClarity and ThinkShield system support for seamless infrastructure management and improved data security.

About SPECaccel

The SPEC ACCEL benchmark suite provides a comparative measure the performance of hardware accelerator devices and their supporting software tool chains using computationally-intensive parallel applications. The suite is comprised of scientific applications used in High Performance Computing (HPC) and focuses on parallel computing performance.

The suite has been ported using several accelerator programming models each of which has been released as separate benchmark components:

- SPEC ACCEL OpenCL -- based on the Open Computing Language (OpenCL) 1.1 framework
- SPEC ACCEL OpenACC -- based on the Open Accelerators (OpenACC) 1.0 programming standard for parallel computing
- SPEC ACCEL OpenMP -- based on the Open Multi-Processing (OpenMP) 4.5 application programming interface

The product consists of source code benchmarks that are developed from real user applications.

For more information and SPEC ACCEL results, see http://www.spec.org/accel/.

Learn more

To learn more about solutions for parallel computing workloads, please contact your Lenovo Sales Representative.

To find out more about SPEC, visit https://www.spec.org

To learn more about the Lenovo ThinkSystem SR860 V2 server, visit the SR860 V2 product web page: https://www.lenovo.com/us/en/data-center/servers/mission-critical/ThinkSystem-SR860-V2-Server/p/77XX7HS86V2

Related product families

Product families related to this document are the following:

- 4-Socket Rack Servers
- SPECaccel Benchmark Results
- ThinkSystem SR860 V2 Server

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